



6CM6

# BEAM POWER TUBE

9-PIN MINIATURE TYPE

6CM6

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . . 6.3 . . . . . ac or dc volts  
Current . . . . . 0.45 . . . . . amp

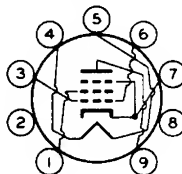
Direct Interelectrode Capacitances (Approx.):<sup>o</sup>

Grid No.1 to plate. . . . . 0.7  $\mu$ f  
Grid No.1 to cathode, grid No.3,  
grid No.2, and heater . . . . . 8  $\mu$ f  
Plate to cathode, grid No.3,  
grid No.2, and heater . . . . . 8.5  $\mu$ f

### Mechanical:

Operating Position. . . . . Any  
Maximum Overall Length. . . . . 2-5/8"  
Maximum Seated Length . . . . . 2-3/8"  
Length, Base Seat to Bulb Top (Excluding tip) . . . . . 2"  $\pm$  3/32"  
Diameter. . . . . 0.750" to 0.875"  
Dimensional Outline . . . . . See General Section  
Bulb. . . . . T6-1/2  
Base. . . . . Small-Button Noval 9-Pin (JETEC No.E9-1)  
Basing Designation for BOTTOM VIEW. . . . . 9CK

Pin 1-Grid No.2  
Pin 2-No Connec-  
tion  
Pin 3-Grid No.1  
Pin 4-Heater  
Pin 5-Heater



Pin 6-Grid No.1  
Pin 7-Cathode,  
Grid No.3  
Pin 8-No Connec-  
tion  
Pin 9-Plate

## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . . 315 max. volts  
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . . 285 max. volts  
GRID-No.2 INPUT . . . . . 2 max. watts  
PLATE DISSIPATION . . . . . 12 max. watts  
PEAK HEATER-CATHODE VOLTAGE:  
Heater negative with respect to cathode . . . . . 200 max. volts  
Heater positive with respect to cathode . . . . . 200<sup>▲</sup> max. volts

### Typical Operation and Characteristics:

Plate Voltage . . . . .	180	250	315	volts
Grid-No.2 Voltage . . . . .	180	250	225	volts
Grid-No.1 (Control-Grid) Voltage. . . . .	-8.5	-12.5	-13	volts
Peak AF Grid-No.1 Voltage . . . . .	8.5	12.5	13	volts
Zero-Signal Plate Current . . . . .	29	45	34	ma
Max.-Signal Plate Current . . . . .	30	47	35	ma
Zero-Signal Grid-No.2 Current . . . . .	3	4.5	2.2	ma
Max.-Signal Grid-No.2 Current . . . . .	4	7	6	ma

<sup>o</sup>, <sup>▲</sup>: See next page.

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## BEAM POWER TUBE

Plate Resistance (Approx.) . . . . .	50000	50000	80000	ohms
Transconductance . . . . .	3700	4100	3750	$\mu$ mhms
Load Resistance . . . . .	5500	5000	8500	ohms
Total Harmonic Distortion . . . . .	8	8	12	%
Max.-Signal Power Output . . . . .	2	4.5	5.5	watts

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . . 0.1 max. megohm

For cathode-bias operation . . . . . 0.5 max. megohm

## VERTICAL-DEFLECTION AMPLIFIER

**Maximum Ratings, Design-Center Values Except as Noted:***For operation in a 525-line, 30-frame system<sup>□</sup>*

DC PLATE VOLTAGE . . . . .	315	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>#</sup> . . . . .			
(Absolute maximum) . . . . .	2000 <sup>■</sup>	max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	285	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE . . . . .	250	max.	volts
CATHODE CURRENT:			
Peak . . . . .	120	max.	ma
DC . . . . .	40	max.	ma
GRID-No.2 INPUT . . . . .	1.75	max.	watts
PLATE DISSIPATION . . . . .	8	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . . . . .	200	max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>▲</sup>	max.	volts

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:

For cathode-bias operation . . . . . 2.2 max. megohms

## VERTICAL-DEFLECTION AMPLIFIER

*Triode Connection<sup>†</sup>***Maximum Ratings, Design-Center Values Except as Noted:**

DC PLATE VOLTAGE . . . . .	315	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>#</sup> . . . . .			
(Absolute maximum) . . . . .	2000 <sup>■</sup>	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE . . . . .	250	max.	volts
CATHODE CURRENT:			
Peak . . . . .	120	max.	ma
DC . . . . .	40	max.	ma
PLATE DISSIPATION . . . . .	9	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . . . . .	200	max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>▲</sup>	max.	volts

□, ▲, ■, #, †: See next page.



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## BEAM POWER TUBE

### Characteristics:

Plate Voltage . . . . .	250	volts
Grid-No.1 Voltage . . . . .	-12.5	volts
Amplification Factor . . . . .	9.8	
Plate Resistance (Approx.) . . . . .	1960	ohms
Transconductance . . . . .	5000	$\mu$ mhos
Plate Current . . . . .	49.5	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5 . . . . .	-37	volts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:  
For cathode-bias operation. . . . . 2.2 max. megohms

<sup>c</sup> Without external shield.

<sup>▲</sup> The dc component must not exceed 100 volts.

<sup>□</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>#</sup> This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

<sup>■</sup> Under no circumstances should this absolute value be exceeded.

<sup>†</sup> Grid-No.2 connected to plate.

### CURVES

shown under Types 6V6 and 6V6-GT, within ratings,  
also apply to the 6CM6